Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

1 (Original).   A method of modifying an image to be displayed on a display;

(a)   receiving said image; and

(b)   modifying said image by alternatively overdriving at least one pixel of said image based upon the predicted displayed luminance value of said pixel in a previous image to increase or decrease said at least one pixel's luminance output.

2 (Original).   The method of claim 1 wherein said image is the next sequential frame after said previous image.

3 (Original).   The method of claim 1 where said predicted actual displayed luminance value is at a state where liquid crystal material associated with said pixel of said display is not at an equilibrium state.

4 (Withdrawn).   The method of claim 1 wherein said modifying includes a first look up table that provides a first input to a second lookup table, said second lookup table provides a second input to a buffer; said buffer provides a third input to said first look up table, said buffer provides said third input to said second look up table.

5 (Withdrawn).   A method of modifying an image to be displayed on a display;

(a)   receiving said image; and

(b)   modifying said image by alternatively overdriving at least one pixel of said image based upon the value of said pixel in a previous image to increase or decrease said at least one pixel's luminance output, where said value is

based upon said pixel in said previous image not reaching an equilibrium state.

6 (Withdrawn).   The method of claim 5 wherein said modifying said image is also based upon the predicted displayed luminance value of said pixel in a previous image to increase or decrease said at least one pixel's luminance output

7 (Withdrawn).   The method of claim 5 wherein said image is the next sequential frame after said previous image.

8 (Withdrawn).   The method of claim 5 wherein said modifying includes a first look up table that provides a first input to a second lookup table, said second lookup table provides a second input to a buffer; said buffer provides a third input to said first look up table, said buffer provides said third input to said second look up table.

9 (Withdrawn).   A method of modifying an image to be displayed on a display;

(a)   receiving said image; and

(b)   modifying said image by alternatively overdriving at least one pixel of said image based upon the value of said pixel in a previous image to increase or decrease said at least one pixel's luminance output, where said value is based upon an estimate of the actual displayed luminance values of said pixel in said previous image.

10 (Withdrawn). The method of claim 9 wherein said image is the next sequential frame after said previous image.

11 (Withdrawn). The method of claim 9 where said actual displayed luminance value is at a state where liquid crystal material associated with said pixel of said display is not at an equilibrium state.

12 (Withdrawn). The method of claim 9 wherein said modifying includes a first look up table that provides a first input to a second lookup table, said second lookup table provides a second input to a buffer; said buffer provides a third input to said first look up table, said buffer provides said third input to said second look up table.

13 (Withdrawn). A method of modifying an image to be displayed on a display;

(a)   receiving said image; and

(b)   modifying said image by alternatively overdriving at least one pixel of said image based upon the value of said pixel in a previous image to increase or decrease said at least one pixel's luminance output,

    (i)   wherein said value is based upon, at least in part, a function of the driving value of said pixel of said image and the displayed luminance value of said pixel in said previous image.

14 (Withdrawn). The method of claim 13 where said displayed luminance value is at a state where liquid crystal material associated with said pixel of said display is not at an equilibrium state.

15 (Withdrawn). A method of modifying an image to be displayed on a display;

(a)   receiving said image; and

(b)   modifying said image by alternatively overdriving at least one pixel of said image based upon the value of said pixel in a previous image to increase or decrease said at least one pixel's luminance output, wherein said value is based upon, at least in part, a function of the driving value of said pixel of said image and a predicted displayed luminance value of said pixel in said previous image.

16 (Withdrawn). The method of claim 15 wherein said function is defined as:
z.sub.n=f.sub.z(x.sub.n,d.sub.n-1).

17 (Withdrawn). The method of claim 16 wherein d.sub.n is defined by d.sub.n=f.sub.model(z.sub.n,d.sub.n-1), where a current actual display value d.sub.n is estimated from the current driving value z.sub.n and the previous display value d.sub.n-1.

18 (Withdrawn). A method of modifying an image to be displayed on a display;

(a)   receiving said image; and

(b)   modifying said image by alternatively overdriving at least one pixel of said image based upon the value of said pixel in a previous image to increase or decrease said at least one pixel's luminance output, wherein said value is based upon, at least in part,

    (i)   a first lookup table characterizing the current driving value for said pixel of said image, and

    (ii)   a second lookup table characterizing a previous display value for said pixel of said previous image.

19 (Withdrawn). The method of claim 18 wherein said first lookup table provides an input to said second lookup table.

20 (Withdrawn). The method of claim 19 wherein said second lookup table provides an input to a buffer.

21 (Withdrawn). The method of claim 20 wherein said buffer provides an input to said first lookup table.

22 (Withdrawn). The method of claim 21 wherein said buffer provides an input to said second lookup table.

23 (Withdrawn). The method of claim 22 wherein an input to said first lookup

table receives an input video signal.

24 (Withdrawn). An overdrive system for modifying an image to be displayed on a display, comprising:

(a)   said overdrive system receiving said image;

(b)   said overdrive system alternatively modifying said image by changing the value of at least one pixel of said image based upon the value of said pixel in a previous image to increase or decrease said at least one pixel's luminance output, wherein said value is based upon, at least in part,

(i)   a first lookup table characterizing the current driving value for said pixel of said image, and

(ii)   a second lookup table characterizing a previous display value for said pixel of said previous image.

25 (Withdrawn). The method of claim 24 wherein said first lookup table provides an input to said second lookup table.

26 (Withdrawn). The method of claim 25 wherein said second lookup table provides an input to a buffer.

27 (Withdrawn). The method of claim 26 wherein said buffer provides an input to said first lookup table.

28 (Withdrawn). The method of claim 27 wherein said buffer provides an input to said second lookup table.

29 (Withdrawn). The method of claim 28 wherein an input to said first lookup table receives an input video signal.

30 (Withdrawn). An overdrive system for modifying an image to be displayed on a display, comprising:

    (a)   said overdrive system receiving said image; and

    (b)   said overdrive system alternatively modifying said image by changing the value of at least one pixel of said image based upon said pixel in a previous image to increase or decrease said at least one pixel's luminance output, wherein said value is based upon, at least in part,

        (i)   a first function operatively associated with a buffer including information associated with said pixel of said previous image;

        (ii)   a second function operatively associated with said pixel of said image.

31 (Withdrawn). The system of claim 30 wherein said first function is a first lookup table.

32 (Withdrawn). The system of claim 30 wherein said second function is a second lookup table.

33 (Withdrawn). The method of claim 30 wherein said function provides an input to said second function.

34 (Withdrawn). The method of claim 33 wherein said second function provides an input to a buffer.

35 (Withdrawn). The method of claim 34 wherein said buffer provides an input to said first function.

36 (Withdrawn). The method of claim 35 wherein said buffer provides an input to said second function.

37 (Withdrawn). The method of claim 36 wherein an input to said first function receives an input video signal.

38 (Withdrawn). An overdrive system for modifying an image to be displayed on a display, comprising:

(a)   said overdrive system receiving said image;

(b)   said overdrive system modifying said image by changing the value of at least one pixel of said image based upon the value of said pixel in a previous image, wherein said value is based upon, at least in part,

(i)   a first lookup table characterizing the current driving value for said pixel of said image, and

(ii)   a second lookup table characterizing a previous capacitance value associated with said pixel of said previous image;

(c)   wherein said modifying is based upon a one-to-one relationship between said first and second look up tables and said modified value.

39 (Withdrawn). The method of claim 38 wherein said relationship is free from being ill defined.

40 (Withdrawn). The method of claim 38 wherein said first lookup table provides an input to said second lookup table.

41 (Withdrawn). The method of claim 40 wherein said second lookup table provides an input to a buffer.

42 (Withdrawn). The method of claim 41 wherein said buffer provides an input to said first lookup table.

43 (Withdrawn). The method of claim 42 wherein said buffer provides an input to said second lookup table.

44 (Withdrawn). The method of claim 43 wherein an input to said first lookup table receives an input video signal.

45 (Withdrawn). An overdrive system for modifying an image to be displayed on a display, comprising:

(a)   said overdrive system receiving said image;

(b)   said overdrive system modifying said image by changing the value of at least one pixel of said image based upon the value of said pixel in a previous image, wherein said value is based upon, at least in part,

(i)   a first lookup table characterizing the current driving value for said pixel of said image, and

(ii)   a second lookup table characterizing a previous display value for said pixel of said previous image;

(c)   wherein said modifying is based upon a one-to-one relationship between said first and second look up tables and said modified value.

46 (Withdrawn). The method of claim 45 wherein said relationship is free from being ill defined.

47 (Withdrawn). A method of modifying an image to be displayed on a display:

(a)   receiving said image;

(b)   modifying said image by alternatively overdriving at least one pixel of said image in the case that the value of said pixel in a previous image to increase or decrease said at least one pixel's luminance output and the value of said pixel in said image is the same;

(c)   wherein said modifying is based upon a one-to-one relationship between said first and second look up tables and said modified value.

48 (Withdrawn). The method of claim 47 wherein said relationship is free from being ill defined.

49 (Withdrawn). The method of claim 47 said modifying is based upon, at least in part, (i) a first lookup table characterizing the current driving value for said pixel of said image, and (ii) a second lookup table characterizing a previous display value for said pixel of said previous image.

50 (Withdrawn). The method of claim 49 wherein said first lookup table provides an input to said second lookup table.

51 (Withdrawn). The method of claim 50 wherein said second lookup table provides an input to a buffer.

52 (Withdrawn). The method of claim 51 wherein said buffer provides an input to said first lookup table.

53 (Withdrawn). The method of claim 52 wherein said buffer provides an input to said second lookup table.

54 (Withdrawn). The method of claim 53 wherein an input to said first lookup table receives an input video signal.

55 (Withdrawn). A method of modifying an image to be displayed on a display:
(a)   receiving said image; and
(b)   modifying said image by overdriving at least one pixel of said image based upon data regarding said pixel from a plurality of previous images.

56 (Withdrawn). The method of claim 55 wherein said plurality of previous images is at least two previously sequential images.

57 (Withdrawn). The method of claim 55 wherein said modifying includes a plurality of frame buffers.

58 (Withdrawn). The method of claim 57 wherein the output of a first frame buffer is provided as an input to a second frame buffer.

59 (Withdrawn). The method of claim 57 wherein said plurality of frame buffers includes at least three frame buffers.

60 (Withdrawn). The method of claim 55 wherein said modifying said image includes alternatively overdriving said at least one pixel of said image to increase or decrease said at least one pixel's output.

61 (Withdrawn). A method of modifying an image to be displayed on a display:

(a)   receiving said image;

(b)   modifying said image by alternatively overdriving at least one pixel of said image based upon data regarding said pixel from a previous image to increase or decrease said at least one pixel's luminance output, wherein said modifying is based upon the predicted displayed luminance value of said pixel in a previous image, wherein said modifying is in a manner free from using the output provided to said at least one pixel as an input for said overdriving;

(c)   wherein said modifying is based upon a one-to-one relationship between said first and second look up tables and said modified value.

62 (Withdrawn). The method of claim 61 wherein said modifying is not recursive.

63 (Withdrawn). The method of claim 61 wherein said modifying is free from being ill defined.

64 (Withdrawn). A method of modifying an image to be displayed on a display:

(a)   receiving said image; and

(b)   modifying said image by overdriving at least one pixel of said image based upon data regarding said pixel from a plurality of images, wherein at least one of said plurality of images is an image yet to be provided to said pixels of said display.

65 (Withdrawn). The method of claim 64 wherein said data includes future desired values for said pixels.

66 (Withdrawn). The method of claim 64 wherein at least one of said images includes an image temporally previous to said received image.

67 (Withdrawn). A method of modifying an image to be displayed on a display; (a) receiving said image; and (b) modifying said image by selectively overdriving different portions of said image based upon the content of said image.

68 (Withdrawn). The method of claim 67 wherein said content of said image includes high movement.

69 (Withdrawn). The method of claim 67 wherein said content of said image includes movement.

70 (Withdrawn). The method of claim 67 wherein said content of said image includes low movement.

71 (Withdrawn). The method of claim 67 wherein said content of said image includes moving edges.

72 (Withdrawn). The method of claim 67 wherein said content of said image includes stationary edges.

73 (Withdrawn). The method of claim 67 wherein said content of said image includes color content.

74 (Withdrawn). The method of claim 67 wherein said content of said image includes texture.

75 (Withdrawn). The method of claim 67 wherein said content of said image includes edges.

76 (Withdrawn). A method of modifying an image to be displayed on a display; (a) receiving said image; and (b) modifying said image by selectively overdriving different portions of said image based upon image information.

77 (Withdrawn). The method of claim 76 wherein said image information is the content of said Image.

78 (Withdrawn). The method of claim 77 wherein said content is edge information.

79 (Withdrawn). An overdrive system for modifying an image to be displayed on a display, comprising:

(a)   said overdrive system receiving said image;

(b)   said overdrive system modifying said image by changing the value of at least one pixel of said image based upon the value of said pixel in a previous image, wherein said value is based upon, at least in part,

   (i)   a first lookup table characterizing the current driving value for said pixel of said image, and

(ii)   a second lookup table characterizing a previous value for said pixel of said previous image;

(c)   wherein the size of the first lookup table is different than the size of the second lookup table.

80 (Withdrawn). The method of claim 79 wherein at least one of said first and second lookup tables characterizes capacitance.

81 (Withdrawn). The method of claim 79 wherein at least one of said first and second lookup tables is a one-dimensional lookup table.

82 (Withdrawn). The method of claim 79 wherein the other of said at least one of said first and second lookup tables is a two-dimensional lookup table.

83 (Withdrawn). The method of claim 79 wherein said first lookup table provides an input to said second lookup table.

84 (Withdrawn). The method of claim 83 wherein said second lookup table provides an input to a buffer.

85 (Withdrawn). The method of claim 84 wherein said buffer provides an input to said first lookup table.

86 (Withdrawn). The method of claim 85 wherein said buffer provides an input to said second lookup table.

87 (Withdrawn). The method of claim 86 wherein an input to said first lookup table receives an input video signal.

88 (Withdrawn). An overdrive system for modifying an image to be displayed on a display, comprising:

(a)   said overdrive system receiving said image;

(b)   said overdrive system modifying said image by changing the value of at least one pixel of said image based upon said pixel in a previous image, wherein said value is based upon, at least in part,

(i)   a first function operatively associated with a buffer including information associated with said pixel of said previous image;

(ii)   a second function operatively associated with said pixel of said image;

(c)   wherein the order of said first function is different than the order of said second function.

89 (Withdrawn). The system of claim 88 wherein said first function is a first lookup table.

90 (Withdrawn). The system of claim 89 wherein said second function is a second lookup table.

91 (Withdrawn). The system of claim 90 wherein said first lookup table and said second lookup table have a different number of entries.

92 (Withdrawn). An overdrive system for modifying an image to be displayed on a display, comprising:

(a)   said overdrive system receiving said image;

(b)   said overdrive system modifying said image by changing the value of at least one pixel of said image based upon said pixel in a previous image, wherein said value is based upon, at least in part,

(i)   a first function operatively associated with a buffer including information associated with said pixel of said previous image;

    (ii)   a second function operatively associated with said pixel of said image;

(c)   said overdrive system modifying the contents of said buffer based upon said first function if said pixel is overdriven; and

(d)   said overdrive system modifying the contents of said buffer in a manner different from what would have otherwise been applied if said pixel is not overdriven.

93 (Withdrawn). The method of claim 92 wherein said modifying said image is alternatively to increase or decrease pixel luminance output

94 (Withdrawn). A method of modifying an image to be displayed on a display;

(a)   receiving said image; and

(b)   modifying said image by overdriving at least one pixel of said image based upon a luminance value of said pixel in a previous image; and

(c)   wherein said prediction is based upon the contents of a buffer that is modified in a first manner if said image is overdriven and modified in a different manner if said image is not overdriven.

95 (Withdrawn). The method of claim 94 wherein said modifying said image is alternatively to increase or decrease pixel luminance output

96 (Withdrawn). A method of modifying an image to be displayed on a display;

(a)   receiving said image; and

(b)   modifying said image by overdriving at least one pixel of said image based upon a luminance value of said pixel in a previous image; and

(c)   wherein said prediction is based upon the contents of a buffer that is modified in a manner using at least one one-dimensional look up table.

97 (Withdrawn). The method of claim 96 wherein said modifying said image is alternatively to increase or decrease pixel luminance output

98 (Withdrawn). The method of claim 96 wherein said prediction includes determining if a minimum output to a pixel is provided.

99 (Withdrawn). The method of claim 96 wherein said prediction includes determining if a maximum output to a pixel is provided.

100 (Withdrawn). The method of claim 96 wherein said prediction includes determining if a minimum output to a pixel is provided and if a maximum output to a pixel is provided wherein a different value is provided to said buffer based upon said determining.

101 (Withdrawn). The method of claim 100 wherein if said determining is not said minimum or said maximum then a different value is provided to said buffer.

102 (Withdrawn). A method of modifying an image to be displayed on a display; (a) receiving said image; and (b) modifying said image by selectively overdriving different portions of said image based upon detecting edges within said image.

103 (Withdrawn). The method of claim 102 wherein said modifying said image is alternatively to increase or decrease pixel luminance output

104 (Withdrawn). A method of modifying an image to be displayed on a display;
(a)   receiving said image; and
(b)   modifying said image by overdriving at least one pixel of said image based upon a luminance value of said pixel in an image yet to be displayed.

105 (Withdrawn). The method of claim 104 wherein said modifying said image is alternatively to increase or decrease pixel luminance output.

106 (Withdrawn). A method of modifying an image to be displayed on a display;

(a)   receiving said image; and

(b)   modifying said image by overdriving at least one pixel of said image based upon a luminance value of said pixel in a plurality of previous images.

107 (Withdrawn). The method of claim 106 wherein said modifying said image is alternatively to increase or decrease pixel luminance output

108 (Withdrawn). A method of modifying an image to be displayed on a display;

(a)   receiving said image; and

(b)   modifying said image by overdriving at least one pixel of said image based upon a luminance value of said pixel in a previous image; and

(c)   wherein said prediction is based upon the contents of a plurality of buffers containing information regarding a plurality of images.

109 (Withdrawn). The method of claim 108 wherein said modifying said image is alternatively to increase or decrease pixel luminance output

110 (Withdrawn). An overdrive system for modifying an image to be displayed on a display, comprising:

(a)   said overdrive system receiving said image; and

(b)   said overdrive system modifying said image by changing the value of at least one pixel of said image based upon the value of said pixel in another image, wherein said value is based upon, at least in part,

(i)   a first lookup table having at least one value less than zero.

111 (Withdrawn). The method of claim 110 wherein said modifying said image is alternatively to increase or decrease pixel luminance output.

112 (Withdrawn). An overdrive system for modifying an image to be displayed on a display, comprising:

    (a)   said overdrive system receiving said image; and

    (b)   said overdrive system modifying said image by changing the value of at least one pixel of said image based upon the value of said pixel in another image, wherein said value is based upon, at least in part,

        (i)   a first lookup table having at least one value greater than the maximum value that may be provided to said display.

113 (Withdrawn). The method of claim 112 wherein said modifying said image is alternatively to increase or decrease pixel luminance output.